

PATENT
2503-1215

IN THE U. S. PATENT AND TRADEMARK OFFICE

In re application of

Ezio BOMBARDELLI Conf. 1808
Application No. 10/580,190 Group 1655
Filed: May 23, 2006 Examiner Qiuwen Mi
Title: COMPOSITIONS FOR THE TREATMENT
OF AFECTIONS OF THE ORAL CAVITY
AND UPPER RESPIRATORY TRACT

DECLARATION UNDER 37 C.F.R. § 1.132

1. I, Ezio Bombardelli, a named inventor, am a citizen of Italy and reside at Via Gabetta 13, I-27027 GROPELLO CAIROLI, Italy.

2. I am familiar with the above-identified U.S. patent application, its prosecution before the United States Patent and Trademark Office, and the applied art references of KORNEYEV (U.S. Patent 6,576,269), ZULLI et al. (U.S. Publication 2002/0131942), GHOSAL (U.S. Patent 6,224,906), YALOVENY AGRIC IND (SU 1373398A), NIEUWENHUIZEN et al. (U.S. Publication 2003/0064937), COOPER et al. (U.S. Patent 6,379,720), WALKER et al. (U.S. Patent 5,474,774), IMAOKA et al. (JP 406179609), BARNEY et al. (U.S. Patent 5,370,863), Van DEN BERGHE (U.S. Patent 6,284,289), ZOU (CN 1421240), GORENBEIN et

al. (U.S. Patent 5,955,102) and GIOVANNI et al. (Journal of Natural Products, 65(3):334-8, 2002).

3. In order to demonstrate the patentability of the invention, I offer the following data of unexpected results.

Six groups of 20 patients of both sexes suffering from acute bacterial pharyngitis and throat pain were enrolled.

The patients were treated with 100 mg of the single active principle (either anthocyanosides, procyanidins or floroglucinol) three times a day for 3 days.

Before and at 60 min after the last treatment the patients were asked to assess pain intensity (P.I) according to the following 6-point (0-5) scale:

0 = no pain,

1 = hardly any pain,

2 = moderate pain,

3 = moderately severe pain,

4 = severe pain,

5 = very severe pain.

Moreover, hyperaemia of pharynx and tonsils was also evaluated according to a 4-point scale (absent = 0,

slight = 1, moderate = 2, severe 3). The results are reported in Table 1.

TABLE 1

	P.I.		Inflammation of pharynx and tonsils	
	Basal Value	After treatment	Basal Value	After treatment
<i>Vaccinium myrtillus</i> extract (A)	4.7	4.0	2.8	1.9
<i>Vitus vinefera</i> extract (B)	4.5	4.1	2.8	2.0
<i>Mirtus Communis</i> extract (C)	4.6	4.2	2.9	2.2
Composition containing B+C	4.6	2.5	2.8	0.7
Composition containing A+B+C	4.7	1.7	2.9	0.1
Placebo	4.6	4.4	2.9	2.8

At the same time, the patients proceeded with a 20s gargling with 10 ml sterile distilled water followed by the collection of samples.

The samples were adequately diluted with Ringer's solution containing 0.2% dithiothreitol, and 0.5 ml of each dilution were spread on 4 agar plates (Columbia) supplemented with 5% sheep blood. The plates were incubated in a CO₂ atmosphere for 72 h for anaerobic

culture. After incubation the number of colonies was counted. The results are reported in Table 2.

TABLE 2

	Bacterial count ($\times 10^5$) in gargling samples	
	Basal Value	After treatment
<i>Vaccinium myrtillus</i> extract (A)	20.2	15.2
<i>Vitus vinefera</i> extract (B)	21.4	16.9
<i>Mirtus Communis</i> extract (C)	21.0	17.2
Composition containing B+C	23.2	4.9
Composition containing A+B+C	22.9	2.6
Placebo	23.6	22.4

The unexpected results of the invention are thus clear, and any alleged unpatentability is fully rebutted.

It is also noted that these experimental results that were found to be convincing in the written opinion issued by the EPO.

4. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both,

under §1001 of Title 18 of the United States code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date _____

Ezio Bombardelli